NEWS

rk progresses on Pittsburgh's waterfront express highway—see p. 2

Work out the idea with INLAND

Some piling installations and other construction projects move along much more smoothly from planning stages to completion than others. One important reason is the kind of co-operation the contractor or fabricator gets and knows he can depend upon from the steel maker.

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ENGINEERING NEWS-RECORD

NEWS

Volume 123 SEPTEMBER 7, 1939 Number 10

NOTEBOOK NEWS

Quick Surveys of Construction Events

▶ LAST WEEK the construction industry was on a peacetime basis. News of war in Europe now confronts it with a new set of conditions. How they will affect construction is anybody's guess.

Significant pointers—

Business and finance took the outbreak of war in stride. The panic that seized on everyone in the similar event of 1914 was significantly absent, indicating that we are better prepared.

Big shifts in foreign trade were initiated by Great Britain's prompt prohibition of luxury imports, automobiles included. South American countries that had traded largely with the warring nations turned to the United States as their essential supply source.

Twenty-five years ago—

Those who remember back to 1914-15 are recalling what followed the paralysis of the first few months of panic. American industry had to get into action to supply the world's needs. Mills and factories soon were running day and night. Many had to be rehabilitated or enlarged; new factories were built.

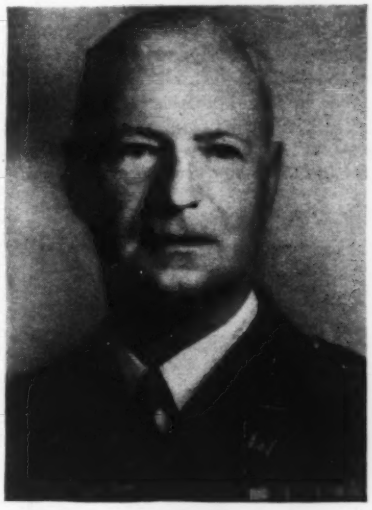
Jobs increased rapidly in the three years before 1917. Construction was active, in public works and housing as well as in factory construction.

Some present data—

This summer's reports from industry and construction show progressive rise in both. Construction volume is at a level that will mean very busy times if war demands call for a substantial increase in factories, airports, pipelines, and transport facilities.

Labor peace—

No indications have appeared to date to show whether the customary labor peace of war periods will establish itself here. As labor trouble has bothered construction a good deal during recent months, developments on the labor front will be worth watching.



GEN. ROBINS PROMOTED

BRIG. GEN. THOMAS M. ROBINS was sworn in Sept. 1 as an assistant to the Chief of Engineers; he succeeds Brig. Gen. Max C. Tyler who, on the same day, became president of the Mississippi River Commission. In his new post, General Robins will have charge of civil works of the engineer corps, including flood control and river and harbor projects.

Recently stationed at Fort Belvoir, General Robins was formerly division engineer at Portland, Ore., and at San Francisco, where he was in charge of the South Pacific Division from 1929 to 1931 and of the Pacific Division until 1934. Earlier he served for three years in the office of the Chief of Engineers at Washington.

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Move to Buy Water System Fails at Indianapolis

The city council of Indianapolis Aug. 30 abandoned the city's plan to buy the property of the Indianapolis Water Co. The action resulted because of the deadlock between the city and owners of the company over a guarantee against taxes and other liabilities.

Oklahoma Governor Opposes Dam Work

Attorney general ordered to start injunction suit to halt Denison project on Red River

Reviving a controversy of last Spring, Governor Phillips of Oklahoma has instructed the attorney general of Oklahoma to start an injunction suit to prevent the War Department from proceeding with the $48,000,000 Denison Dam, a power and flood control project on the Red River. This action was taken after the Governor declared he had received no reply from Secretary of War Woodring in answer to his most recent request concerning the work. The Governor also indicated he might call out the national guard to halt work on the project.

In his inaugural address early this year and in statements since that time, Phillips has complained of the loss of state revenues arising from the flooding of farm lands and state-owned oil lands. He asserts that taking of reservoir land by the federal government without state permission violates state rights.

Presumably as a result of the Governor's protests, the plans of the dam were

(*Continued on p. 2*)

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New York City to Purchase Rapid Transit Subways

A contract to allow New York City to purchase rapid transit properties of the Interborough-Manhattan subway system for $151,000,000 has been signed by Mayor LaGuardia and Comptroller McGoldrick. Representatives of holders of the subway securities also signed the contract.

In signing the contract the Mayor explained that the contract price represented "the last penny" the city would pay for the property and warned that any attempt to block the transaction would cause the city to withdraw its offer.

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Typhoid Outbreak Traced To Sewer Pollution

Polluted water caused a serious epidemic of typhoid at the Illinois state hospital for the insane, near Manteno, Ill., according to an investigation by state chemists. Up to Aug. 31 there had been eight deaths, while about 200 employees and others were ill, some of them being in serious condition. The other 5,400 patients and 770 employees have been inoculated against typhoid. Four drilled wells which supply the institution with 1,000,000 gallons daily were chlorinated on Aug. 19, after the outbreak had occurred.

According to a published statement by Dr. R. T. Hinton, superintendent of the hospital, the wells are sunk to limestone rock and cased, but the rock has seams and fissures which may receive and transmit seepage. Recently, outdoor wooden lavatories were put up for workmen engaged in erecting new buildings, and it is thought that seepage from these may have reached the wells, especially as shocks due to blasting for the foundations may have broken the casings. When a number of patients and attendants became ill early in August the trouble was at first thought to be some form of gastro-intestinal disease, but when they developed temperatures, typhoid fever was suspected and verified. Investigation had been made also as to the possibility of typhoid carriers being present in the institution.

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Denison Dam Approved

(Continued from page 1)

changed some months ago, reducing the height of the dam and the reservoir area and bringing the cost down from $54,000,000 to $48,000,000. WPA workers are now clearing the reservoir site, and bids were opened Aug. 18 for excavation of outlet works and erection of a construction bridge. A sum of $5,600,000 has been alloted from flood control funds for expenditure this year on the dam.

First sign of Phillips' continued opposition came late last month when he wrote to Secretary of War Woodring reiterating his position and suggesting court action. The Secretary recently replied assuring Phillips that every effort would be made to settle amicably any disputes that might arise, especially as to road relocation and the flooding of oil lands. The Secretary also said he could see no distinction between Denison and other Oklahoma flood control projects—a statement interpreted by some as a threat to shut down all the state's projects if the Denison Dam project is halted.

Susquehanna at Harrisburg Near Record Low

The stage of the Susquehanna River at Harrisburg, Pa., last week was within half an inch of its record low, the low water being 2.82 ft., the stage recorded in 1931. Last week's reading was 2.87 ft.

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Navy to Construct Alaska Air Bases

The Navy Bureau of Yards and Docks Aug. 31 signed contracts for the construction of air bases at Kodiak Island, and Sitka, Alaska, a contract for $12,700,000 being awarded on a cost plus a fixed fee basis. The Siems Spokane Company, Spokane, and Johnson, Drake & Pipper, Inc., Minneapolis, and Puget Sound Bridge & Dredging Co., Seattle, are joint contractors.

The Kodiak base is in the Bay of Alaska and Sitka is on the Alaskan mainland.

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Drouth Loss in Utah Estimated at $6,000,000

Utah this year has suffered a loss of $6,000,000 because of drouth. William Peterson, director of the Utah agricultural experiment station, estimates. Peterson recommends the construction of storage reservoirs. He explained that this year's loss equals half the total amount invested in operating reservoirs, exclusive of the Deer Creek project.

EXPRESS HIGHWAY ALONG PITTSBURGH'S WATERFRONT

SIX LANES of local traffic and four lanes of through traffic will be accommodated by the new express two-level roadway now under construction along 3,000 ft. of the Monongahela side of Pittsburgh's "Golden Triangle." An architect's drawing of the finished project appears above, and a construction view, looking downstream, is shown on the cover of this issue.

This piece of express highway is a part of a waterfront program which contemplates improvement along the Monongahela from near the Point to Grant St. and along the Allegheny River from near the Point to Tenth St. The portion now under construction extends along the Monogahela from the vicinity of Liberty Ave. to Grant St. It will provide an 8-ft. sidewalk and two 30-ft. roadways separated by ramps to a 40-ft.-wide lower level. The inner, or westbound upper roadway, occupies the present location of Water St., and the outer roadway and sidewalk is elevated over wharf space and part of the lower level.

The reinforced cantilever type retaining wall between the inner road and the underpass is soil bearing in a sand-and-gravel stratum. Other structures are supported in reinforced concrete cast-in-place piles. The outer roadway consists of a series of reinforced concrete bents spaced at 54 ft., which in turn support steel girders designed as alternate anchor and suspended cantilever spans supporting the armored concrete roadway deck.

Work is scheduled for completion by June 30, 1940. The John F. Casey Co. holds three contracts on the job and other contractors are Donatelli and Donatelli and The American Bridge Co. John F. Laboon is director of the Allegheny County Dept. of Works.

WASHINGTON HIGHLIGHTS

Special reports by Paul Wooton

TAKING A LEAF from the little black book in which Treasury Undersecretary John W. Hanes noted more than a hundred ways in which taxes were unnecessarily deterring business, Commerce Secretary Harry Hopkins has ordered that a list be made of building deterrents. He thinks if all these deterrents can be segregated from the other problems of construction that something can be done about them. While it is recognized that the principal problems center around building code restrictions, union rules, financing and material costs, the plan is to go further and list every deterrent no matter how small so that each may be analyzed and a remedy suggested. It is recognized that this will mean comment on matter under the jurisdiction of other agencies of the government, but it is in line with the announced policy of Secretary Hopkins to consider any matter which affects business and commerce as properly in the field of the Department of Commerce. Robert L. Davidson, who has been in charge of housing research for the John B. Pierce Foundation, has been retained to undertake the listing of the deterrents.

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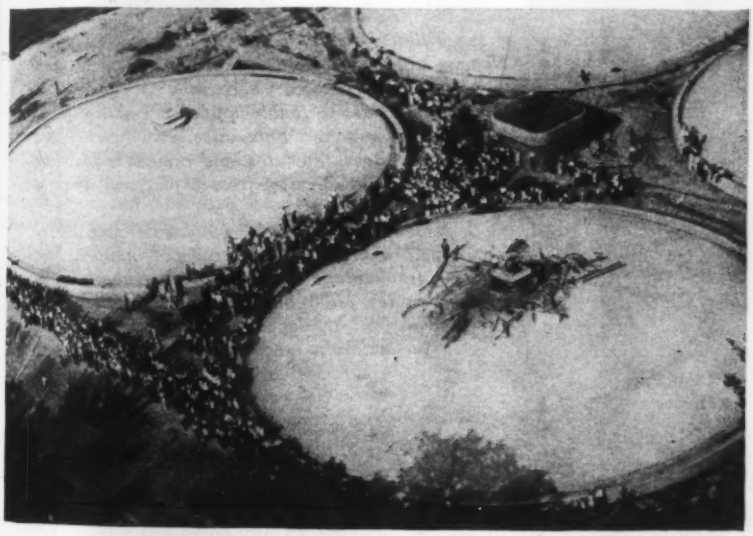
Kingsley Dam Delayed By Right-of-way Trouble

Uncertainty over land rights for the completed 33-mile relocation of the Union Pacific R.R. tracks has delayed construction of the Kingsley Dam of the Central Nebraska Public Power and Irrigation District.

The contractor on the dam had carried the hydraulic fill up to the point where further work required him to occupy the present right-of-way of the Union Pacific line up the North Platte valley, but the railroad was unwilling to release the old line until it was assured of a clear title to the new line built by the power district at a higher level. Part of the new right-of-way had been obtained by condemnation proceedings and title to the land had not been completed when the time came for the changeover.



Argus Photo

ROCK ISLAND RESERVOIR WHERE EXPLOSION KILLED WORKMEN

THREE WORKMEN were killed and one of four new 2,000,000 gal. reservoirs being added to the water supply system of Rock Island, Ill., was damaged Aug. 28 by an explosion of unknown cause. The workmen were cleaning the floor of the reservoir in the lower right hand corner with a naphtha solution proparatory to applying the seal coat.

Damage to the reservoir, which is 135 ft. in diameter and constructed at a cost of $30,000, has not been determined. Spectators said the cover was lifted one foot into the air but only small cracks show on the top.

William S. Hewett, consulting engineer of Chicago, employed on the work, after examining the tank said, "the structure appears to be in surprisingly good condition."

The Priester Construction Co., Davenport, Ia., has the general contract for the water plant addition costing $250,000, but the workmen killed were employed by Holmquist Roofing Co., Moline, Ill., subcontractor.

Applications Diminish For FHA Insurance

Attributed to policy of restricting operations to low-rent projects

Applications for FHA insurance on large scale rental projects have suffered a very considerable drop this year as compared with last. This is attributed to the policy adopted last spring by FHA of restricting its operations to projects of a definitely low rent nature. The agency now is trying to push rentals on the medium projects into the low brackets and is turning down all projects aimed at the high-income group except those on which commitments have already been made.

Meanwhile, the FHA's rental division is sitting tight and coasting along at a comparatively low level of activity waiting for builders to come around to its view that high-rent projects are aimed at too narrow a market and subject to too much rent-fluctuation to be sound long-term investments. The projects FHA wants to see pushed are those that can rent for less than $15 per room per month in most cities, $16.50 in the biggest cities, and $12 in cities under 100,000.

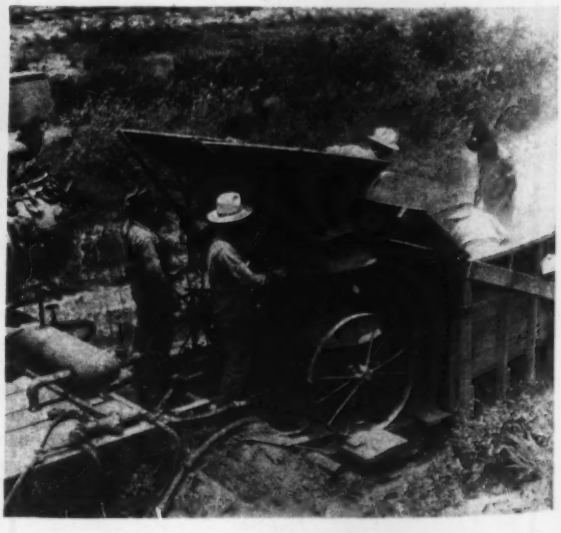
Some part of the current slowing up of applications is probably attributable also to the requirement inserted early this year by Congress that prevailing wages be paid on the large-scale projects. FHA does not feel that this will have any permanent effect, since about 80 per cent of projects are now built by union labor. However, requirement of a certificate of compliance from the Department of Labor causes a good deal of red tape, and some potential builders may fear wage troubles.

Insurance of mortgages on multi-family dwellings for rent has been included in the FHA program since its beginning in 1934. The law, however, contained a number of ambiguities, including a specification that projects provide "housing for persons of low income." Hesitation on the part of possible lenders resulted, and up to the beginning of 1938 only 21 mortgages, totaling $15,005,000 had been insured. Early in that year several amendments were made, of which the most important dropped the "low-income" phrase and substituted a $1,350 per room limit on the mortgage that might be insured (not on the cost). Volume of applications increased at once, and 91 mortgages were insured during 1938 with a total value of $44,364,000. Applications continued at a satisfactory level through the first months of this year but dropped sharply when the wage requirement and the new rent policy became effective.

Building 214 Miles of Gunite-Line

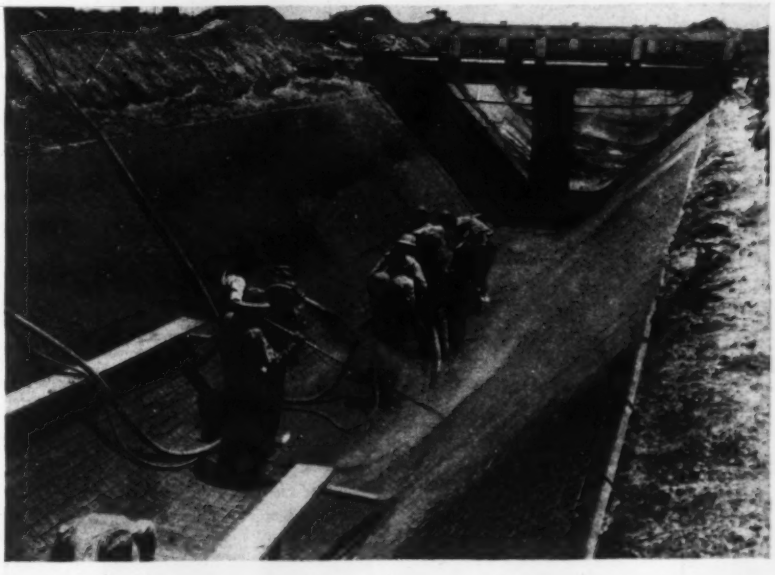
NEAR THE SOUTHERN TIP of Texas construction forces are building 214 mi. of gunite-lined canal as a part of the Willacy County Water Control and Improvement District work. Operations begin at the cement-sand central mixing plant, above, where sand is clamshelled from the stockpile into a double-hopper bin which feeds two chutes to a dry mixer. Successive sand batches are weighed into the alternate chutes, and cement is fed, bag by bag, into a central opening from a platform directly below the bin.

The 1:5 cement-sand batch is combined in the mixer (left) and belt-conveyed to the covered hopper bin, shown above, for haulage by truck to the job-site. The central plant mixes 2,900 bags of cement with 14,500 cu. ft. of sand in a 12-hr. day. During transit, trucks are covered with tarpaulins to keep the wind from blowing cement away.



AT THE JOB, (right) truckloads of sand-cement are dumped into a portable box from which the mix is shoveled into cement guns. Partly visible at the left of the picture is the trailer-mounted horizontal type compressor, which provides 600 cu. ft. of air per min. for blowing the dry mix to the nozzles. This rig follows the work along the canal.

nal in Texas



FIELD PREPARATION *for the lining work begins with roughing out by dragline. Fine-grading is by hand; the banks are shaped to accurate subgrade by use of a heavy cutting bar called a "yo-yo." Steel templets are used as guiding tracks for the bar. On the banks, 4 by 4 in. 13/13 wire mesh reinforcement is then stretched into place.*

A two-nozzle shooting crew (right) places the pneumatic concrete. The crew includes two nozzlemen, two finishers, two wire men, two cleaners and two inspectors for the district. Water is mixed with the sand-cement at the nozzles. The wire men raise the mesh from the ground as shooting begins. Below is shown a floating pump-spray unit used for curing the unflooded portions of the canal lining. Burlap is the covering material. Water is admitted to the canal as soon as 12 hr. after shooting.

THE WILLACY COUNTY WORK, *a PWA project, comprises 214 mi. of canal of various sizes and shapes; 12¼ million sq. ft. of area is being covered. Shooting began May 22 and is expected to be completed by the middle of December. Ten guns are working continuously. The Cement Gun Co. and the Gunite Concrete and Construction Co. of Kansas City, Mo., are cooperating on the job. R. N. Gillespie is engineer and manager for the contractor, and W. C. Anderson is in charge for the district. J. Wm. Benes is project manager for PWA.*

MEN AND JOBS

LEE A. WALLACE, WPA field engineer with the North Carolina state office at Raleigh, has been appointed chief area engineer for the Williamson office, a consolidation of the Williamson, New Bern and Windsor area offices serving 26 Eastern counties. C. Z. BAILEY, W. O. PRATT, and E. L. WINSLOW, area engineers of the respective offices, will be retained to work under Wallace.

SHEPPARD T. POWELL, consulting engineer of Baltimore, has been appointed a member of the Maryland State Board of Registration for Professional Engineers and Land Surveyors, an agency created by recent legislature. Other members of the board are: A. G. CHRISTIE, head of the department of mechanical engineering, Johns Hopkins University; F. O. SCHNURE, electrical superintendent, Bethlehem Steel Co.; JOHN R. BAKER, engineer for the Pennsylvania Water & Power Co. and VINTON D. COCKEY, engineer and surveyor, Laurel, Md.

W. S. LEA, hydraulic engineer of Montreal, has been engaged by the city council of St. John, N. B., as consulting engineer for the water supply improvement being built for the city of St. John. He will be assisted by D. R. SMITH, city engineer.

E. H. GEBAUER, and C. P. HAGNER, JR., civil engineering graduates from the University of Cincinnati in 1934, have organized the Gebauer & Hagner company. They will specialize in the sale of building products.

H. E. KLOSS, Somerset, Pa., has been named assistant district engineer with the Pennsylvania State Highway Department. Other recent highway appointees are: BYRON C. GREGORY, Scranton, project engineer and THOMAS M. RENTZ, Hollidaysburg, district plans engineer.

FRANCIS T. MCAVOY, engineer in the Massachusetts Department of Public Works for the past 27 years, has been named acting construction engineer to succeed RAYMOND W. COBURN, newly appointed chief engineer. Permanent appointment of McAvoy is expected shortly through civil service channels.

A. C. ALLEN, assistant state director of WPA operations in Texas and formerly in charge of the planning and control section of that division, has been assigned to the executive section of the division of operations. Other recent changes are: CHARLES W. MCKENNON, JR., former construction engineer, has been appointed state planning engineer in charge of the planning and control section of the division of operations; ALFRED D. HAWLEY, former chief of the material section, has been made the state supply officer to be in charge of the supply section of the division of operations; GEORGE W. CALDWELL, state field representative of the division of operations, has been placed in charge of the construction section of the division of operations, and FELIX C. TAPP, state safety consultant, will remain in charge of the safety section of the division of operations.

P. E. HIGHUM, engineer with the Minnesota State Highway Department, has been appointed engineer for Dodge County, Minn. His headquarters will be at Mantorville.

GEORGE K. LEONARD, a graduate of the University of Nebraska in 1912, has been appointed construction engineer for the TVA Watts Bar Dam. He is a former member of the engineering staff of the Nebraska State Highway Department and was assistant construction engineer for Wheeler Dam. Later he worked as construction engineer on the Guntersville Dam.

SAMUEL R. GOULD has been rehired as city engineer of Campbell, Ohio, a position held for the past two years.

LAWRENCE RUHLEN of Canton, Ohio, has accepted a position as maintenance engineer on the canal locks at Colon, Panama Canal Zone.

FRANK J. KISH, assistant civil construction engineer with TVA on Chickamauga Dam, has been transferred to the Watts Bar project near Spring City, Tenn.

ROLAND WALL, former WPA administrator for Mississippi, returned to Mississippi Sept. 1 to resume his old duties. For a short time he has been stationed in North Carolina on similar work.

C. F. TELLER of Houston, Tex., has been appointed assistant engineer of Hardin County, Tex., to take part in a large road-building program for that county.

JOSEPH E. BURKE, assistant works director of Allegheny County, Pa., has been appointed director of the Allegheny County Housing Authority. CLIFF J. RYAN, the present director, will be retained in another capacity. Burke at one time was district engineer with the Pennsylvania State Highway Department.

BRUCE UTHUS, WPA regional director at Chicago, has been appointed to a staff assignment in Washington. He will be replaced by GEORGE H. FIELD, regional director at New Orleans. LAWRENCE WESTBROOK, assistant administrator, will succeed Field.

H. H. TRIPP, former division engineer of the Canadian Pacific Ry. at Edmonton, Alta., has been made division engineer at Fort William, Ont.

EARL SIMPSON, Hydro, Okla., has been named resident highway engineer for Caddo County, Okla. He will begin his new duties Sept. 1.

J. R. CASWELL, civil engineer of Smith Falls, Ont., has been named assistant district engineer with the Canadian National R. R. at Toronto.

M. V. GREER, member of the traffic and safety division of the Texas State Highway Department, has been named a fellow of the street traffic research bureau of Yale University for the coming academic year.

JOHN G. MUNSON, president of Michigan Limestone and Chemical Co. since 1928, has been elected vice president in charge of raw materials of the U. S. Steel Corp. of Delaware. After graduating from Yale University in 1905, he began his engineering career as a rodman on tunnel construction in Washington, D. C. Until 1909 he was connected with the water department of

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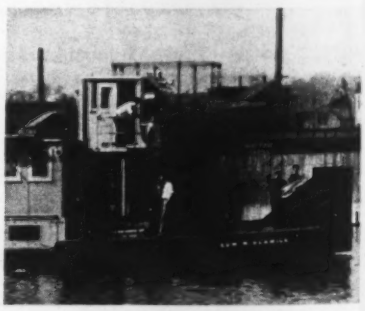

A TOWBOAT THAT DUCKS FOR LOW BRIDGES

A TOWBOAT, the Renwick, designed to allow for the pilot house to be lowered for passing under low bridges has been placed in operation by the Marine Transit Co. on the Chicago River where bridge clearances are limited. The entire pilot house is mounted on a hydraulic lift electrically controlled. The boat was built by the Manitowoc Ship Building Co.

that city. In 1909 he became superintendent of the J. G. White Engineering Corp. of New York, a position he held until he joined the U. S. Steel organization.

MEETINGS

AMERICAN CHEMICAL SOCIETY, div. of water, sewage and sanitation chemistry, Boston, Mass., Sept. 12-14.

CONCRETE REINFORCING STEEL INSTITUTE, semi-annual meeting, Hotel Hershey, Hershey, Pa., Sept. 14-16.

SOUTHWESTERN VALLEYS ASSOCIATION, Marion Hotel, Little Rock, Ark., Sept. 15.

FEDERATION OF ARCHITECTS, ENGINEERS, CHEMISTS AND TECHNICIANS, Federation Day at the Fair, World's Fair Grounds, New York City, Sept. 16.

WATER CONSERVATION DAYS group, annual program, Miles City, Montana, Sept. 15-16.

AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, Richmond, Va., Oct. 9-13.

PUBLIC WORKS CONGRESS, annual meeting, Pittsburgh, Pa., Oct. 9-11.

MISSISSIPPI VALLEY ASSOCIATION, annual meeting, St. Louis, Mo., Oct. 15-17.

AMERICAN PUBLIC HEALTH ASSOCIATION, annual meeting, Pittsburgh, Pa., Oct. 17-20.

AMERICAN SOCIETY OF SAFETY ENGINEERS, annual meeting, Atlantic City, N. J., Oct. 18.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS, fall meeting Atlanta, Ga., Oct. 30-31.

NATIONAL RECLAMATION ASSOCIATION, annual convention, Denver, Colo., November 14-16. Directors meeting Nov. 12-13.

REGIONAL AND LOCAL

NEW ENGLAND WATER WORKS ASSOCIATION, annual convention, Hotel Windsor, Montreal, Sept. 12-15.

SOUTH DAKOTA WATER AND SEWAGE WORKS CONFERENCE, fifth annual meeting, Rapid City, Sept. 14-15.

AMERICAN WATER WORKS ASSOCIATION, Rocky Mountain Section, third annual meeting, Colorado State College, Fort Collins, Colo., Sept. 18-20.

CENTRAL MONTANA HIGHWAY ASSOCIATION, Great Falls, Mont., Sept. 20.

NORTH DAKOTA WATER AND SEWAGE WORKS CONFERENCE, Dickinson, N. D., Sept. 22-23.

NORTHERN MICHIGAN COUNTY ROAD COMMISSIONERS ASSOCIATION, annual meeting, Traverse City, Mich., Sept. 28-29.

AMERICAN WATER WORKS ASSOCIATION, section meetings: Minnesota, Duluth, Aug. 24-25; West Virginia, Morgantown, Sept. 27-29.

AMERICAN WATER WORKS ASSOCIATION, Four States section, annual meeting, Reading, Pa., Oct. 5-6.

NEW YORK STATE SEWAGE WORKS ASSOCIATION, fall meeting, Olean, N. Y., October 6-7.

CLEVELAND ENGINEERING SOCIETY, Cleveland, Oct. 10; meeting to be held as part of Machine Tool Congress coincident with the Machine Tool Show.

CENTRAL STATES SEWAGE WORKS ASSOCIATION, annual meeting, Chicago, Ill., Oct. 12-13.

AMERICAN WATER WORKS ASSOCIATION, Southwest Section, annual meeting, Dallas, Tex., Oct. 16-19.

AMERICAN WATER WORKS ASSOCIATION, New Jersey section, fall meeting, Atlantic City, N. J., Oct. 20-21.

AMERICAN WATER WORKS ASSOCIATION, California section, annual convention, San Francisco, Oct. 25-28.

AMERICAN WATER WORKS ASSOCIATION, New York Section, fall meeting, Utica, N. Y., Nov. 2-3.

AMERICAN WATER WORKS ASSOCIATION, North Carolina Section, fall meeting, Charlotte, N. C., November 6-8.

ELECTIONS AND ACTIVITIES

REGISTRATION totaled 72 at the district convention of the A.S.C.E. held at Houghton, Mich., Aug. 24-26. Many brought their families and the first and third days were given over to pleasures and trips. Speakers were: Daniel W. Mead, past president of the A.S.C.E.; Louis E. Ayres, director of the seventh district; Henry E. Riggs, also a past president of the society, and James L. Ferebee, Milwaukee,, vice-president of the third zone. L. J. Larson at Milwaukee was elected president. Other new officers are: R. M. Palmer of Duluth and H. S. Loeffler of Duluth, vice-presidents, and L. C. Wilcoxen of Detroit, secretary-treasurer.

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License Examinations

IOWA: Examinations for professional engineering, Sept. 19-20; for land surveyor, Sept. 21, at the State House, Des Moines.

Law May be Needed For California Flood Work

State engineers of California have raised the question whether a special act of Congress may be necessary before the state and federal government may continue work on the $51,000,000 Sacramento-San Joaquin flood control project.

Although an appropriation of $1,258,000 for the work was included in the deficiency bill passed by Congress during its recent session, officials in charge of the reclamation work believe an authorization bill must be enacted before the work can proceed. The rivers and harbors bill contained a $1,600,000 appropriation for the project construction contained the necessary authorization clause, but the bill was shelved during the closing days of the session.

The state legislature has appropriated $1,200,000 for the project to be spent during the current half-year. However, the money is tied up with legal restrictions which prevent its being used unless matched with federal funds.

If the federal money had been appropriated as usual, state engineers pointed out that many projects would be under way because of the desirability of allowing the ground on levees to settle before high water comes.

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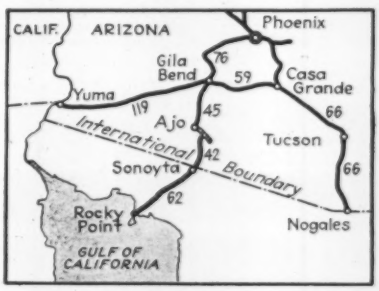


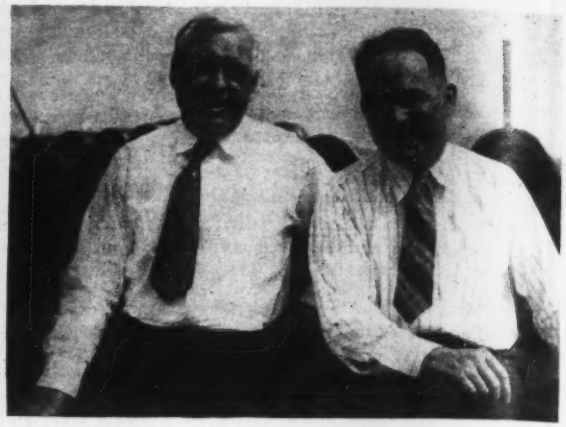
Arizona Gets Seaport

Arizona's "corridor" to the sea, a sixty-mile strip of land from the international boundary across Mexico to the Gulf of California, has been designated by the Governor of Sonora, Mexico, a free zone and the terminus of the road, Port Penasco, a free port.

The highway now under construction connecting Sonoyta and Port Penasco is 25 per cent complete, construction crews working from both ends. The subgrade is being constructed to railroad standards to allow laying track when the docks and breakwaters at Port Penasco are completed. Until that time the road will be surfaced with a 22-ft. asphalt strip to allow trucking to the port.

The highway is scheduled for completion in 1940 and the docks at Port Penasco in 1941.

Down in the caisson of a pier for the Ferry St. bridge in New Haven, Conn., the ubiquitous photographer surprises the "brains" of the job in a friendly discussion on concrete and how it should be placed. In the usual order of l. to r.: **Irving Alpert,** resident engineer; **Vincent Barry,** director of public works; **Ray Riegeluth,** vice president, C. W. Blakeslee & Co., contractors; and **John Bursey,** superintendent of construction. The novel method of making a ring seal around this sheetpile cofferdam was described by Riegeluth in the Aug. 3 issue of *ENR*, p. 161.



Elton F. Durfee, commissioner of public works, Cranston, R. I., and **C. W. Riva,** resident engineer for Fay, Spofford & Thorndike, consultants, take time out on an inspection trip of the city's $6,000,000 sanitary sewer construction program to give the editor a picture. These men have the distinction of building the first sewer ever laid in this city of 45,000 population. Heretofore, Cranston people had depended entirely on septic tanks for sewage disposal. The aid of the Work Projects Administration was enlisted to correct this unusual situation.

MEN AT WORK

Gunnar Akerlindh, engineer of design, Norrkoping, Sweden, who recently completed a three months' study of water supply and sewage disposal projects in the United States. Following an itinerary mapped out by *Engineering News-Record*, he reported that the hospitality and eagerness of American engineers to furnish information made a profound impression. Some of his technical findings will be incorporated in improvements to be made by his city.

W. H. Larkin, division engineer of the New York state department of health, was an "official" observer at the dedication of the Goshen, N. Y., sewage treatment plant in August, and later in the day assumed the role of an unofficial (but highly interested) spectator at the famous Hambletonian trotting races. The quizzical expression comes from having lost three bets in a row to the editor—he judges sewage effluents better than horses.

R. H. Cason, city engineer of Tampa, can lay claim to two distinctions—he is a native Floridian (they are hard to find!), and he has been in the engineering department of the city for 34 years. Cason is now completing one of Florida's major municipal construction projects, a waterfront improvement program involving the construction of a sea wall paralleled by a six-lane concrete highway. For relaxation he operates a 70-acre lime grove.

OBITUARY

FREDERICK A. MILLINGTON, 86, a civil engineer who surveyed routes for many of the railroads through the southwest, died at Memphis, Tenn., Aug. 24. For many years he was employed in the engineering department of the Illinois Central R. R. He was also associated with his father and three brothers for many years as associate in an engineering firm.

JOHN F. BOTTGER, retired contractor, died Aug. 23 at St. Louis, Mo. He was 70 years old and had retired several years ago.

ANDREW F. MACALLUM, Canadian municipal engineer, died in Toronto, Ont., Aug. 26. He was a graduate of the University of Toronto in civil engineering and had served with both the Canadian Pacific and Canadian National railways before taking up municipal work. For six years he was city engineer of Hamilton, Ont., and later for 16 years city engineer and commissioner of works for the City of Ottawa.

ELMER F. BLAKESLEE, 40, vice-president of Stone & Webster Engineering Corp., died Sept. 3 in Englewood, N. J. He was a civil engineering graduate from the University of Illinois, and for the last 28 years had been associated with Stone & Webster, having been made vice-president about a year ago. He had been in charge of construction of the Cathedral of Learning for the University of Pittsburgh, and the university's stadium. Other buildings constructed by the company under his direction in Pittsburgh included: the Falk Clinic and the Falk School, the Presbyterian Hospital, the Eye & Ear Hospital, and the Woman's Hospital.

EUGENE A. RANDLE, 66, builder and contractor at Dallas, Tex., for the past thirty years, died there Aug. 24.

CHARLES H. DANA, an employee of the city engineering department of Dallas, Tex., for the past several years, died Aug. 26 at the age of 74. For many years he was with the Santa Fe Ry., leaving to become chief engineer when the Dallas Union Terminal was constructed.

BAILEY G. WILSON, 76, Mayor of Conway, Ark., since 1933, died Aug. 28. He was a civil engineer engaged in construction work in South Arkansas for several years, and served as engineer for three main highways built in Faulkner County, Ark., in 1920.

ABRAHAM L. MILLER, a builder and contractor of Dallas, Tex., for the past 35 years, died there Aug. 22 at the age of 76.

N. B. MCLEAN, former chief engineer of the St. Lawrence River Ship Channel for the Department of Transport, Ottawa, died Aug. 21, in Beloeil, Quebec. He was made chief engineer in 1930.

WALTER P. BLACKWOOD, JR., 47, president of the Central Paving and Construction Co. of St. Louis, died Aug. 26 in Jackson, Miss. He had been with the company for the past 25 years, becoming president two years ago.

THOMAS K. WILLIAMS, building contractor of Okmulgee, Okla., died Aug. 30 at the age of 73 years.

DEWEY N. EVANS, 40, formerly associated with the Indiana State Highway Commission, died recently in Wooton, Ky. At the time of his death he was area supply engineer for WPA in the mountains of southeastern Kentucky. He was a graduate of Purdue University, and was construction engineer on many roads in Indiana and Kentucky, being associated with the Kentucky State Highway Commission after leaving the Indiana commission.

CHRISTOPHER G. HOWE, retired civil engineer, died Aug. 31 in Charleston, S. C., at the age of 74 years. Prior to his retirement four years ago, he was associated with the Simons-Mayrant Co. of Charleston. Prior to that he was employed on the Panama Canal.

TRACY LEWIS, 65, construction engineer of St. Petersburg, Fla., died there recently. He had built many large buildings in the State of Florida.

MAJOR HUGH B. HOOPER, 51, army engineer stationed at Nashville, Tenn., died Aug. 29. He entered the government service in 1909.

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Falsework Failure Wrecks Concrete Arch in Sweden

According to a brief Associated Press dispatch from Stockholm, published in the *New York Times*, timber falsework supporting a 720-ft. concrete arch span over the Aangermann River, between the towns of Lunde and Sandoe in Sweden, collapsed Aug. 31 during closure operations, killing 32 workmen. An *ENR* cable to Swedish authorities brings confirmation of the accident, but omits details. If the span is of the length reported, it is the longest concrete arch span ever attempted.

Alabama PWA Projects Stopped by Carmody

Action follows drastic restrictions on public power projects by state legislature

Nine PWA projects in Alabama have been halted by Federal Works Administrator Carmody as a result of passage by the state legislature of drastic restrictions on public power projects in the state. Carmody, moreover, has hinted that all PWA money may be withdrawn from the state if the law is not repealed or amended.

The so-called Booth Act which was signed by Governor Dixon of Alabama on Aug. 18 required that before a public power body services an area it must buy all the private power facilities in the area. It was passed by the legislature over protests by FWA, TVA, and REA officials.

The nine projects already halted, which involve $680,000 of PWA funds, are a hospital building at Birmingham and eight dormitory buildings at Alabama State Teachers College. Although these are not power projects, Carmody said that since electricity is to be furnished with the rent of hospital and dormitory rooms, the new law might jeopardize PWA's financial interest in the projects.

Amendments to the bill were introduced, after conferences between Carmody and state Attorney-General Lawson, exempting projects where electric service is incidental to other purposes.

In a Sept. 1 telegram to Governor Dixon, however, Carmody pointed out that the proposed amendments would not exempt all present PWA projects in the state and urged that the act be repealed outright. Carmody's message concluded with the paragraph:

"Incidentally, I wonder if you are aware of the fact that PWA commitments for loans and grants for Alabama projects amount to a total of $14,500,000 for 118 projects."

It is reported that PWA attorneys are now examining other Alabama projects for possible connections with the Booth Act.

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Train Derailed When Truck Damages Bridge

The locomotive and two baggage cars of a Maine Central R.R. passenger train were derailed Aug. 30 at New Gloucester, Me., when a heavy truck damaged an underpass bridge, throwing the railroad tracks out of line.

It is reported that the truck was moving a steam shovel and none of the passengers were hurt.

Reservoir Overflow Pollutes Town's Water Supply

Following a heavy rain a storm sewer at Fulton, Ill. backed up recently to pollute the town's entire water system by discharging into the collecting reservoir via the reservoir's overflow connection to a manhole. A local engineer noticing turbid water coming from a tap in a restaurant investigated and found the sewer discharging into the reservoir.

The inspection showed that a plug in the reservoir had been removed making possible back flow from the sewer. The reservoir was pumped out and its walls were cleaned with a strong chlorine solution, the entire distribution system heavily chlorinated and flushed out, and citizens were warned to boil their water when a new supply was made available.

There was little water consumed during the danger period and there has been no evidence of intestinal illnesses. Numerous people voluntarily submitted to typhoid inoculation.

C. W. Klassen, engineer of the Illinois division of sanitation, is using the example of the town of Fulton to warn other towns and cities to check their overflow connections with sewers.

• • •

New River Power Case Again in the Courts

New hearings in the long-fought battle between the Federal Power Commission and the Appalachian Power Co. over the latter's power project on the New River were held before the U. S. Court of Appeals, fourth circuit, in Asheville, N. C., Aug. 28–30. The case centers around the refusal of the power company to apply for a federal license for a power project on the New River (now completed and in operation) on the grounds that the New River at the site of the power dam is not navigable. Begun in 1934, the present action is an appeal by the Federal Power Commission from a ruling of the U. S. District Court of the western district of Virginia which in 1938 reversed the commission's order to the power company requiring it to take out a license (*ENR* Apr. 28, 1938, p. 604). The district court held that the New River is not navigable and so is not under the jurisdiction of the commission. Both Virginia and West Virginia have entered the present case in support of the position taken by the power company.

The court of appeals has made no finding, but whatever its decision it is expected that it will be carried to the U. S. Supreme Court for a final determination of the question of whether a stream that in itself is not navigable but whose flow may affect the flow in a navigable river is "navigable" under the section of the Constitution that gives the federal government control over navigable rivers. In an earlier attempt to get the case before the Supreme Court it was sent back to the lower court on a technicality without a ruling on the constitutional question.

The question is important because on it hangs a decision as to whether the state or the federal government control many power sites.

Work Started in Maryland on Savage River Dam

Surveys for construction of the Savage River Dam on the Potomac River 20 miles southwest of Cumberland, Md. have begun. It is to be an earth dam 185 feet high and about 1200 feet long and will cost $2,400,000.

The dam is being built by the Upper Potomac River Commission to impound water during the spring runoff for use to increase flow during the summer.

CONTRACTS AND CAPITAL

Engineering construction awards for the short week due to the Labor Day holiday total $52,006,000, a decrease of 1 per cent from the volume for the corresponding week last year.

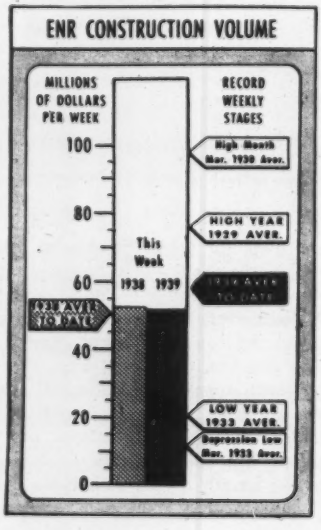
The current week's awards bring 1939 construction volume to $2,101,921,000, an increase of 16 per cent over the $1,814,710,000 for the initial 36-week period in 1938.

Public construction for the week is 7 per cent higher than in the 1938 week, but private awards are 19 per cent lower than a year ago.

Two large awards totalling $14,650,000 for the Chicago subway project bring unclassified construction to its highest weekly volume since July 8, 1937. In addition to unclassified construction, sewerage, industrial buildings, and commercial building and large-scale private housing report gains over a week ago; and sewerage, industrial buildings, and earthwork and drainage, top their respective totals for the 1938 week.

New capital for construction purposes for the week, $4,508,000, is 90 per cent below the volume for the week a year ago. This week's financing is made up of $2,772,000 in state and municipal bonds, and $1,736,000 in corporate security issues.

New construction financing for 1939 to date totals $2,154,248,000, a 24 per cent decrease from the $2,828,044,000 reported for the corresponding period a year ago.



CONTRACTS

(Thousands of dollars)

	Week Ending 1938 Sept. 8	1939 Aug. 31	1939 Sept. 7
Federal	$7,001	$12,990	$6,290
State & Municipal	29,011	29,791	32,329
Total public	$36,012	$42,781	$38,619
Total private	16,444	24,228	13,387
TOTALS	$52,456	$67,009	$52,006
Cumulative 1939	(36 weeks)		$2,101,921
1938	(36 weeks)		$1,814,710

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1938 36 Wk.	1939 36 Wk.
NON-FEDERAL	$1,684,102	$1,026,220
Corp. securities	284,863	175,314
State & Mun.	407,089	406,754
R.E.A. loans	13,543	89,445
R.F.C. loans	96,891	3,855
P.W.A. allot.	525,688	.....
U.S.H.A. loans	154,528	160,852
Fed. Aid—Hwys.	201,500	190,000
FEDERAL	$1,143,942	$1,128,028
TOTAL CAPITAL	$2,828,044	$2,154,248

FHA MORTGAGES

	Week Ending Sept. 3 1938	Aug. 26 1939	Sept. 2 1939
Selected for appraisal	$22,824	$21,798	$22,000*
Cumulative 1939	(35 weeks)		$788,387*
1938	(36 weeks)		$670,164

* Subject to revision.

ENR INDEX NUMBERS

Index Base		1913	1926
Construction Cost	Sept.	234.97	112.95
Building Cost	Sept.	196.61	106.28
Volume	Aug.	228	100

CONTRACT UNIT PRICES

What contractors are bidding on different kinds of construction work

WASTEWAY CHANNELS, IDAHO

OWNER: Bureau of Reclamation, Boise Project, Idaho. R. J. Newell, construction engineer.

PROJECT: Earthwork and structures for Tunnel No. 2 wasteway and Tunnel No. 7 wasteway, Black Canyon Canal, Payette Division, Boise Project, Idaho. Work located from about 2 miles south to six miles west of Emmett, Idaho.

CONDITIONS: Government to furnish cement, sand, rock (except for dry-rock paving), reinforcing bars, concrete pipe, lumber for permanent installations, metalwork, piling, corrugated metal pipe and sewer pipe. Contractor to furnish all other materials. Temporary construction required to support railroad tracks during construction of permanent structures will be provided by Government. Existing structures should be carefully dismantled in order to re-use some materials. Where wasteway channels cross streams, care must be taken that no damage is done to public or private interests. Rail (U.P.R.R.) and highway transportation available. Contract time, 200 calendar days. Wage rates: skilled, 90c. to $1.20 per hr.; semi-skilled, 65 to 75c. per hr.; and common, 50c. per hr.

BIDS: Four bids were opened July 17, 1939, ranging from the low of $119,843 to $171,948.

LOW BIDDERS:

1. Henry L. Horn, Caldwell, Idaho..... $119,843
2. David A. Richardson, Caldwell, Idaho..... 121,072
3. J. A. Terteling & Sons, Boise, Idaho..... 127,022

Item	Quan.	Unit Prices (1)	(2)	(3)
1. Excavation, wasteways	400,000 c. y.	$0.07	$0.085	$0.075
2. Excavation, structures	10,000 c. y.	.45	1.00	.70
3. Overhaul	8,000 sta. c. y.	.03	.035	.05
4. Backfill, structures	10,000 c. y.	.10	.12	.12
5. Tamp backfill, struct.	2,000 c. y.	.15	.30	.30
6. Concrete, structures	4,350 c. y.	16.00	12.30	16.15
7. Reinforcing bars	536,000 lb.	.015	.015	.015
8. Dry-rock paving	2,500 s. y.	1.40	1.20	1.50
9. Drive timber piles	650 l. f.	1.00	2.00	1.00
10. Erect timber, struct.	167 M bm.	12.00	13.00	15.00
11. 36-in. lock-joint conc. pipe	90 l. f.	1.20	5.00	1.50
12. 10-in. corr. met. pipe	80 l. f.	.25	1.00	.15
13. 12-in. corr. met. pipe	2,500 l. f.	.25	.30	.15
14. 24-in. corr. met. pipe	40 l. f.	.40	2.00	.25
15. 36-in. corr. met. pipe	40 l. f.	.75	2.00	.50
16. 6-in. underdrain, uncem't. jts.	1,125 l. f.	.07	.45	.50
17. Erect No. 36 metal flume	260 l. f.	.75	2.00	1.50
18. Erect No. 42 metal flume	120 l. f.	.90	3.00	2.00
19. Erect No. 84 metal flume	60 l. f.	1.00	3.00	3.00
20. Install misc. metalwork	100 lb.	.03	.20	.05
21. Remove, salvage c.m.p., struct.	1,500 l. f.	.25	1.00	.10
22. Remove, salvage metalwork in existing flumes	450 l. f.	.20	1.00	.10
23. Remove structs. salvage reusable mat'l. except Items 21 and 22	L.S.	300.00	2,000.00	500.00

SEWERAGE TUNNEL MINNESOTA

OWNER: City of Duluth, Minnesota. Burlingame, Hitchcock & Estabrook, Minneapolis, consulting engineers; Charles Foster, Duluth, associate engineer.

PROJECT: Gravity-flow tunnel section, approximately 4-ft. by 6-ft., through solid rock at depth of 28-ft. to 115-ft. Extends from 3rd Avenue East to 19th Avenue West, under First Street. Tunnel section of intercepting sewer, 10,400 ft. long.

CONDITIONS: All materials to be furnished by contractor. Rail, highway and water transportation available. Stipulated contract time, 305 calendar days, but in no case later than May 21, 1940. Wage rates are: skilled, $1.00 to $1.50 per hr.; semi-skilled, 75c. to $1.00; and common, 67½ to 75c per hr.

BIDS: Four bids were opened July 18, 1939, ranging from the contract low of $268,850 to $396,720.

LOW BIDDERS:

1. Rhude, Fryberger & McDonnell, Duluth, Minn. (contract)..... $268,850
2. Centaur Constr. Co., New York, N. Y..... 331,602
3. Leo Butler Co., Silver Springs, Md..... 346,899

Item	Quan.	Unit Prices (1)	(2)	(3)
1. Vertical tunnel shafts	200 l. f.	$60.00	$70.00	$41.00
2. Standard (type A) tunnel	10,400 l. f.	23.00	29.00	30.40
3. 48-in. rein. conc. pipe	380 l. f.	32.00	35.00	44.00
4. 12-in. cased drill holes, in drift	86 ea.	25.00	12.00	23.00
5. 12-in. open drill holes, in rock	167 ea.	20.00	10.00	23.00

DIKES AND REVETMENT NEBRASKA

OWNER: U. S. Engineer Office, Omaha, Nebr. W. M. Hoge, Army Engineer, Omaha.

PROJECT: Construction of approximately 1,985 ft. of standard dikes and about 6,410 ft. of revetment in or adjacent to Missouri River at Sonora-Hemmies Bend, near Nemaha, Nebr., to improve channel for navigation.

CONDITIONS: Government to furnish piling and lumber, contractor to furnish all other materials. Rail, highway and water transportation facilities available. Wages: skilled, 90c. to $1.12½ per hr.; semi-skilled, 60c. per hr.; and common, 50c. per hr.

BIDS: Seven bids were received June 19, 1939, ranging from the low of $186,119 to $209,274. Engineer's estimate, $194,990.

LOW BIDDERS:

1. Woods Bros. Constr. Co., Lincoln, Nebr..... $186,119
2. Kansas City Bridge Co., Kansas City, Mo... 191,185
3. James Constr. Co., St. Paul, Minn..... 191,711

I—DIKES

Item	Quan.	Unit Prices (1)	(2)	(3)
1. Lumber-fabric mattress	100 sq.	$5.00	$6.00	$6.00
2. Lumber mattress	1,890 sq.	4.00	4.20	4.75
3. Stone, on mattress and dike	3,490 ton	3.00	3.25	3.25
4. Stone in cast paving	120 ton	4.00	4.00	4.00
5. Stone in hand-placed paving	85 ton	5.00	5.00	6.00
6. Crushed stone, foundation course	7 ton	5.00	5.00	5.00
7. Piles, stringers, brace piles, for pile clump and pile clump brace dike, and agle. pile dikes	38,700 l. f.	.19	.17	.21
8. Grading	1,130 c. y.	.20	.15	.20

II — REVETMENTS

Item	Quan.	Unit Prices (1)	(2)	(3)
1. Willow mattress	1,680 sq.	$7.75	$8.00	$6.50
2. Lumber mattress	3,835 sq.	3.80	4.25	4.75
3. Stone, on mattress	11,060 ton	3.00	3.25	3.15
4. Stone, in cast paving	2,345 ton	3.50	4.00	3.50
5. Stone in hand placed paving	1,605 ton	4.25	5.00	4.00
6. Crushed stone, foundation course	145 ton	4.00	4.00	5.00
7. Anchor piles	2,500 l. f.	.35	.30	.30
8. Piles and stringers	86,580 l. f.	.18	.16	.20
9. Grading	22,100 c. y.	.20	.16	.10

CONSTRUCTION REPORTS

Compiled by BUSINESS NEWS DEPARTMENT
Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, MANAGER
(Daily service also available—Write for details)

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

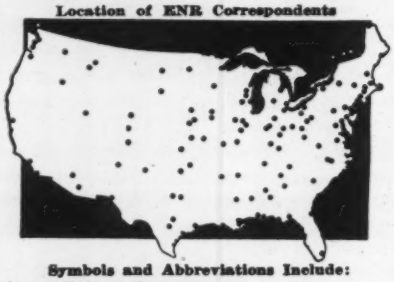
Classes of Construction
(Named in order of Listing)

Water Supply	Unclassified
Sewers, Waste Disposal	Materials, Equipment
Bridges, Grade Cross'gs	Public Buildings
Streets & Roads	Commercial Buildings
Earthwork, Waterways	Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads); BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR); LOW BIDDERS ($500,000 projects and over); CONTRACTS AWARDED

Location of ENR Correspondents



Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD McGraw-Hill Construction Daily

WATER SUPPLY

PROPOSED WORK

Calif., Hawthorne — $47,000 bond election Sept. 18, imprv. water sys., airport runways, spur tracks, 3,700 ft. 14 in. mains and 1 m.g. reservoir.

Calif., San Diego—F. Pyle, engr., City Hall, 9,500 ft. 30 in. water pipe line in Upas St. from 30 St. to 5 Ave. $150,000 available.

Colo., Trinidad—Replacing wood pipe with steel pipe from reservoir to city. $29,000.

Ia., Buck Grove—J. J. Finnigan, city clk., election Sept. 11 to vote on approval construction WW, reservoir, mains, filters, pumps, etc.

Mass., Lynn—City Water Dpt., 1 m.g. reservoir, Lynn Woods. Over $15,000. F. E. Goudy, city engr.

Minn., Ironton—E. J. Taleen, village clk., defeated $30,0000 bonds, water filtration plant. CD 6/14—ENR 6/2.

Mo., Bernie—WW and distr. sys. $70,000. Russell & Axon, 4903 Delmar Blvd., St. Louis, engrs.

N. Y., Pittsford—Bd. Water Comrs., M. Pannell, secy., bids soon ¾ mi. exten. 6 in. c.i. watermain in Long Meadow Water Dist. $15,000. W. S. Lozier, Inc., 10 Gibbs St., Rochester, engr.

N. Y., Savanah — Village will hold referendum on proposed well water supply. Over $15,000. CD 10/5—ENR 10/13.

O., Amherst—E. Cooper, mayor, $60,000 bond election Nov. 7, for WW sys. and treatment plant. Over $60,000.

O., Lorain—City, $23,000 bond election Nov. 7, exten. watermain from Lorain to Brookside suburb. H. F. Alexander, city engr.

O., Pomeroy—Cities of Pomeroy and Middleport, may purchase water plant and construct addn., water lines, etc. $125,000. M. D. Hartley, mayor.

O., Sabina—$42,000 bonds election Nov. 7, imprv. water and light plant, installing 2 Diesel engines. F. M. Stewart, mayor.

O., South Lebanon—$7,500 bond election Nov. 7, complete WW plant, pumps and mains. $54,000. Application for WPA will be made after election. C. Wight, Gas & Electric Bldg., Dayton, engr. CD 5/17—ENR 5/25.

Pa., Bradford—Filtration plant. Over $15,000. J. H. Quirk, city engr. May mature early in 1940.

Tex., Denison—A. M. Brenneke, city engr., WW sys. exten. and imprvs., new reservoir, pump unit, pipe lines, etc. $240,000.

Tex., Frankton — R. Perry, mayor, bids soon WW imprvs., c.i. pipe, storage tank, turbine well pump, etc., $16,000. H. Ferguson, Box 484, Malakoff, engr. CD 8/24—ENR 8/31.

Tex., Highlands—City, c/o L. Doss, complete WW sys. $50,000. H. G. Olmstead, Galveston Rd., Houston, engr.

Tex., Lufkin—C. L. Stine, city mgr., bids soon elevated tank. $7,000.

Wash., Goldendale—H. W. Mort, city clk., modernization water sys. and constructing sewage disposal plant. $62,000. L. R. Stockman, Bend, engr. CD 7/21—ENR 7/27.

Wash., Seattle — C. L. Wartelle, engr., County-City Bldg., will not construct watermains, 16 and 19 Aves. N. E. and in E. 50 St. $9,011. Project abandoned. CD 7/6—ENR 7/20.

Wash., Seattle—C. L. Wartelle, city engr., County-City Bldg., replacing watermains with 16 in. mains in Sand Point Way between 50 and 65 Aves. N. E. $21,000.

Wash., Yakima—Exten. watermains to rural areas. $40,000. WPA asked to allot $31,202 for labor. A. B. Collins, City Hall, engr.

Wis., Gilman—J. Zabrowski, village clk., applied for new WPA funds for WW sys. $60,000. F. J. Davy & Son, La Crosse, engr.

Alta., Lloydminster — Water and sewerage sys. extens. $65,000. Government grant.

B. C., Prince Rupert—W. J. Alder, engr., Prince Rupert, bids soon c.i. pipe, etc., for replacing wooden watermains, for City. $40,000.

Man., Wasagaming—Pump. sta. at Clear Lake, also pipe line to Wasagaming Golf Club. $15,000.

N. S., Digby—Ratepayers defeated proposal for pipe line from Lily Lake Dam to reservoir. $30,000. CD 4/19—ENR 4/27.

Ont., Burlington—M. M. Bush, municipality clk., 500,000 gal. water storage reservoir. $65,000. G. H. Powen, 7 Watson St., Oakville, engr.

Que., Notre Dame de Lourdes—Postponed construction WW sys. until 1940. J. P. A. Forest, 3788 Park Lafontaine, Montreal, engr. CD 7/31—ENR 8/3.

BIDS ASKED

Bids Asked September 15

Ont., Sudbury—R. H. Martindale, WW supt., gasoline driven centrifugal WW pump, 2,000 imperial gpm.

Bids Asked September 26

†**Calif., San Diego**—Eleventh Naval Dist., foot of Bway., drilling, casing new water well, installing deep well pump and pump casing, new fdn. and wood tower for 200,000 wood-stave water tank, connecting pump-equip. with new well, etc., Spec. 9284.

Bids Asked about October 1

Mo., Warrenton—H. Kemper, mayor, WW and distr. sys. also sanitary sewer exten. Approx. $75,000. E. A. Fulton, 3 S. Meramec Ave., Clayton, St. Louis, engr. CD 8/8—ENR 8/10.

CONTRACTS AWARDED

Ark., Dell—Dell Compress Co., 125,000 gal. concrete reservoir, to Raymond Speer, Marked Tree. Private plans.

Calif., Eureka—Mad River headworks filter and treating plant for water sys., to Scheumann & Johnson, Box 822, Eureka, **$22,792.** Bids 8/22. CD 8/16.

Calif., South Pasadena—Elevated steel tank, to Pittsburgh-Des Moines Steel Co., 740 S. Bway., Los Angeles, **$21,650.** Bids 8/23, awarded 8/23. CD 8/9.

Conn., Stamford—Stamford Water Co., 161 Summer St., 1 story, 21x30 ft. pump sta., Vine Rd., to M. A. Genovese & Co., 300 Main St. Est. **$15,000.** CD 8/15—ENR 8/17.

Ia., Council Bluffs—WW sys. at Carter Lake, **WPA. $32,000.** L. N. Hintgen, Council Bluffs, engr.

Mass., Boston—Metropolitan Dist. Water Supply Comn., 20 Somerset St., Contr. 90 of Southboro, Weston, Newton and Melrose Aqueduct Project, Item A, gasoline driven electric generating plant, to Lunt Moss Co., 224 State St., **$257*****Item B, electric hoist, to Robert Abel, Inc., 44 School St., **$2,359*****Item C, special castings, to F. A. Houdlette & Son, Inc., 6 Beacon St., **$2,110*****Item D, special valves, to Lombard Governor Corp., Ashland, **$460*****Item E, sump pump, to Hayes Pump Machine Co., 125 Purchase St., **$298.** Grand total $5,484. Bids 8/24. CD 8/7—ENR 8/10.

Mich., Midland—6 and 8 in. c.i. watermains, to L. W. Wells, 726 N. Niagara St., Saginaw, **$15,000.**

Minn., Goodhue—C. W. Wolfe, village clk., WW imprvs., pump, to Cochran-Sargent Co. (Div. Amer. Radiator & Standard Sanitary Corp.), 300 Bway., New York, **$2,648;** pump house, to Jacob Bros., Bird Island, **$1,288. PWA.** Bids 8/28. CD 8/16.

N. Y., Binghamton—Furnishing, installing groundwater collector sys., Contr. 6, to Ranney Water Collector Corp., 72 Wall St., New York, **PWA.** Bids Aug. 23. CD 8/15—ENR 8/17.

N. Y., New York—Water Supply, Gas & Electricity, Municipal Bldg., New York, 12 in. steel pipe to replace existing pipe Piers 1 and 2, to P. Centofante, 237-14 92 Rd., Queens Village, **$12,813.** Bids 8/15. CD 8/1—ENR 8/10.

N. Y., Trenton—Water distr. sys., Wicks Pl., Park and Mappa Aves., Boom, Remsen and Vander Kamp Sts. **WPA. $25,000.**

O., Kent—WW plant and distr. sys., **WPA. $103,000.** J. S. Osborne, city engr. CD 4/3—ENR 4/13.

O., Mount Pleasant—Water supply force mains, booster station, Sect. F, to Gallagher & O'Horo, 1818 Wilson Ave., Youngstown, **$19,806.** Est. $25,000. **PWA.** Bids 7/15. CD 7/11.

Pa., Halifax—Boro, F. H. Sheesley, pres., 6 in. pipe line from Maramoras to Halifax reservoir. **WPA. $38,500.**

R. I., Newport—Water Comrs., 5 W. Marlborough St., reconstructing Easton's South Reservoir, embankment and spillway, to John Toppa, Newport, **$47,980.** Est. over $15,000. **PWA.** Bids 8/23. CD 8/11—ENR 8/17.

R. I., Providence—Bd. Contr. & Supply, City Hall, 175 tons c.i. B & S water pipe, to Warren Pipe Co., 75 Federal St., Boston, Mass., **$51.50** per ton.

Wash., Blaine—7,215 ft. 4- to 12 in. mains, 3,400 ft. water pipe and 1,000 ft. pipe flume, **WPA. $22,387.** CD 5/19—ENR 5/25.

Wis., Iron Belt—Imrv. water sys, **WPA. $21,766.**

Wis., Peshtigo—E. A. Stibbe, city clk., WW sys. extens., **WPA. $104,825.** A. E. McMahon Eng. Co., Menasha, engrs.

B. C., Vancouver—Water Bd., supply of pipe for exten. Capilano Main 4, to Vancouver Iron Wks., 1155 6 Ave., **$97,951.** W. H. Powell, City Hall, engr.

N. B., St. John—Water pipe line from Lake Latimer to Phinneys Hill, day labor. **$165,000** incl. materials. D. R. Smith, City Hall, engr.

Ont., Harrow—W. Clark Ltd., 955 Amherst St., Montreal, Que., 3 deep wells, to E. F. Roberts & Co., 7 Holme St., Brantford. Private plans. Awarded 8/21.

Que., Thetford Mines—Municipality, 1 mi. aqueduct from Lake Becancourt to town, day labor under supervision G. Beaudet, of owner's staff. **$300,000.** J. A. Dubuc, Sherbrooke, engr.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Calif., East Pal Alto—Sewage disposal plant. $141,132. Engineer not appointed.

Calif., San Francisco—City and San Francisco Co. rescinded contract sewage treatment plant at Hassler Health Home, near Redwood City. New bids will be asked from revised specifications. CD 8/2—ENR 8/10.

Calif., Victorville—Victorville Sanitary Dist. withdrew bids to have been opened Aug. 25, sanitary sewers. $25,000 or more. CD 8/21.

★**Conn., New London**—J. W. Sheedy, city mgr., City Hall, bids soon brick sewage plant and incinerator, Trumbull St. $600,000. Solomon & Keis, 257 Bway., Troy, N. Y., engrs.